

### REMARKS

Applicant respectfully requests entry of the amendments and remarks submitted herein. Claim 28 has been amended herein, and claims 1-27 have been canceled without prejudice to continued prosecution as directed toward non-elected inventions. Support for the amendments to claim 28 can be found, for example, at Figures 1, 2 and 3 as well as throughout the specification.

Claims 28-30 are currently pending. Reconsideration of the pending application is respectfully requested.

#### The 35 U.S.C. §112 Rejections

Claims 28-30 stand rejected under 35 U.S.C. §112, second paragraph, as the Examiner asserted that those claims are indefinite for failing to particularly point out and distinctly claim the subject matter that Applicant regards as the invention. The Examiner asserted that the preamble was unclear, particularly in view of the claimed method step and some of the withdrawn claims.

Without acquiescing to the Examiner's rejection, Applicants have amended claim 28 to clarify the preamble and to make the claimed method step consistent with the preamble. Claim 28 as amended is now directed toward a method for transplanting a recipient and, in addition to subjecting the recipient to total body irradiation, the method includes the step of infusing the recipient, 1 to 5 days after total body irradiation, with donor bone marrow that contains hematopoietic stem cells (HSCs). Applicant believes these amendments address the Examiner's issues discussed under 5A of the current Office Action (on page 3).

With respect to the Examiner's comments under 5B of the current Office Action (on page 3), the Examiner seems to assert that the skilled artisan would not be reasonably apprised of the metes and bounds of the invention due to an apparent contradiction between the claimed method steps and the preamble in combination with Applicant's previous remarks and also in view of withdrawn (now canceled) claims. Applicant submits that claims 28-30 are pending, and the preamble or method steps of withdrawn or canceled claims are irrelevant to the pending claims.

With respect to comments already on the record, Applicant can not locate any remarks in the March 7, 2007 Response to Restriction Requirement that would be considered to be

contradictory. It is noted simply for clarification purposes that the reference to the preambles in the March 7, 2007 Response was intended to distinguish the elected claims (i.e., claims 28-30 originally directed toward 'methods of conditioning a recipient for bone marrow transplantation') from non-elected claims (e.g., independent claim 16 directed toward 'methods for partially or completely reconstituting a mammal's lymphohematopoietic system') only in the context of the species election. Applicant's comments were not intended to characterize the preamble or the claims in any way.

In view of the amendments and remarks herein, claims 28-30 are clear and are not indefinite. Accordingly, Applicant respectfully requests that the rejection of claims 28-30 under 35 U.S.C. §112, second paragraph, be withdrawn.

#### The 35 U.S.C. §102 Rejections

Claims 28-30 stand rejected under 35 U.S.C. §102(b) as anticipated by Sykes et al. (WO 02/40049). According to the Examiner, Sykes et al. teaches that pro-inflammatory conditioning regimes, for example low dose total body irradiation, followed by delayed administration of a donor cell preparation containing HSCs. It is noted that claim 28 has been amended herein to recite that infusion is performed between 1 and 5 days following total body irradiation, and Applicant respectfully traverses this rejection with respect to the pending claims.

Sykes et al. does not teach that transplantation of bone marrow should be delayed following total body irradiation of a recipient as the pending claims recite. Sykes et al. is directed toward reducing GVHD associated with hematopoietic cell grafts by blocking molecules that allow donor T cells to migrate into host tissues. According to Sykes et al., one way to accomplish this is to separate BMT and donor T-cell infusion (page 7, lines 26-27). Sykes et al. also states that "[m]ethods of the invention avoid GVHD...by the use of conditioning regimens that are less toxic and less pro-inflammatory, followed by delayed administration of donor T-cells" (at page 7, lines 18-22). Sykes et al. is not proposing to delay bone marrow transplantation. See, also, Example 1, specifically the description of the treatment on page 41, which describes bone marrow administration on the day following thymic irradiation.

In addition, Sykes et al. states that the "greater susceptibility of lymphohematopoietic cells than other host tissues to destruction by MHC-specific donor T-cells is due to the

immediate contact of donor cells with host cells..." (see page 7, lines 8-11). This passage, however, is with reference to T-cells. Accordingly, Sykes et al. proposes treatments to inhibit T cell activity prior to, during, and/or after administration of donor HSCs. According to Sykes et al., "a pre-stem cell treatment...will be given to the subject about 1, 2, 3, 4, or 5 days prior to stem cell transplantation...[and/or]...a post-stem cell transplant treatment will be given about 1, 2, 3, 4, or 5 days after bone marrow transplantation" (see page 12, lines 21-29). These passages refer to administering a treatment to inhibit T cell activity 1 to 5 days before and/or after bone marrow transplantation and do not refer to delaying the bone marrow transplantation itself.

In addition, the Examiner refers to the first paragraph on page 17 as well as general text on pages 16 to 18 for disclosure that allegedly anticipates Applicant's claim. Nowhere, however, does Sykes et al. disclose delaying bone marrow transplantation. For example, Sykes et al. states that in a mouse model, it was demonstrated that, "if sufficient time is allowed to pass after conditioning and BMT, hematopoietic chimeras produced across MHC barriers are resistant to GVHD" (see page 17, lines 11-15). Sykes et al. also stated that "[I]ethally irradiated mice showed the development of some degree of resistance to GVHD between day 0 and day 8" (see page 17, lines 15-16). None of these passages refer to delaying bone marrow transplantation after total body irradiation.

Sykes et al. does not anticipate the pending claims. In view of the amendments and remarks herein, Applicant respectfully requests that the rejection of claims 28-30 under 35 U.S.C. §102(b) be withdrawn.

#### Obviousness-Type Double Patenting Rejections

Claim 28 stands rejected on the grounds of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-18 of U.S. Patent No. 5,514,364; claim 2 of U.S. Patent No. 5,635,156; and claim 2 of U.S. Patent No. 5,876,692. Claims 28 and 29 stand rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 2 of U.S. Patent No. 5,635,156 and claim 2 of U.S. Patent No. 5,876,692, each in view of Sykes et al. (WO 02/40049). Claim 28 is provisionally rejected on the grounds of nonstatutory obviousness-type double patenting as being unpatentable over claims 18-20 of co-pending U.S.S.N. 10/702,058; claims 11-13, 23 and 26 of co-pending U.S.S.N. 10/134,016;

claims 7, 11-13 of co-pending U.S.S.N. 10/558,513; and claim 2 of co-pending U.S.S.N. 10/558,516. Claims 28 and 29 are provisionally rejected on the grounds of nonstatutory obviousness-type double patenting as being unpatentable over claims 18-20 of co-pending U.S.S.N. 10/702,058; claims 11-13, 23 and 26 of co-pending U.S.S.N. 10/134,016; claims 7, 11-13 of co-pending U.S.S.N. 10/558,513; and claim 2 of co-pending U.S.S.N. 10/558,516, each in view of Sykes et al. (WO 02/40049).

Applicant respectfully requests that this rejection be held in abeyance until allowable subject matter is found. At that time, Applicant will submit an appropriate Terminal Disclaimer.

#### CONCLUSION

Applicant respectfully requests allowance of claims 28-30. Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

/November 7, 2007/

/M. Angela Parsons/

Date: \_\_\_\_\_

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